

ABSTRACT OF THE DISCLOSURE

The present invention provides a method of manufacturing a porous thick film of an oxide that has extremely few cracks and can be satisfactorily used as an oxygen partial pressure detecting part of an oxygen sensor. The present invention relates to a method of manufacturing such a porous thick film as an oxygen partial pressure detecting part of a resistive oxygen sensor comprising taking a fine particle powder of an oxide containing cerium oxide as a raw material powder, preparing a paste containing the oxide, printing the paste onto a substrate by screen printing, calcining and sintering, the method comprising a step of carrying out heat treatment to effect particle growth from the average particle diameter of the raw material powder to a particle diameter less than the average particle diameter of the ultimately obtained thick film, a step of mixing the particle growth-effected powder with a solvent, a step of dispersing agglomerated particles in the solvent, a step of removing a precipitate, a step of evaporating off the solvent, and a step of mixing the resulting oxide with an organic binder to obtain the paste.